Product Support Manager's Role Developing the Acquisition Strategy and Product Support Strategy

Professor Ron Burgess
Life Cycle Logistics

Lunch and Learn Briefing
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Agenda

- Department of Defense Policy
- Product Support Manager
- Product Support Guiding Principles
- Product Support Strategy
- Product Support Strategy Process Model
- Questions

DoD Policy Guidance

DoD Directive 5000.01

Total Systems Approach: ***The PM shall be the single point of accountability for accomplishment of program objectives for total life cycle systems management, including sustainment.***

Performance-Based Logistics: ***PMs shall develop and implement performance based logistics strategies that optimize total system availability while minimizing cost and logistics footprint.***

DoD Instruction 5000.02, Enclosure 6

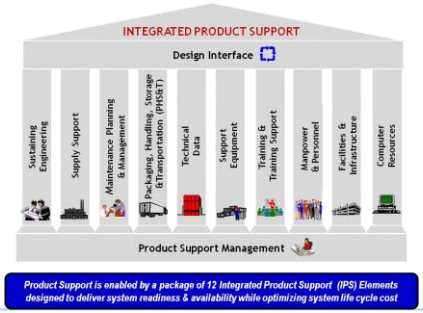
Performance-Based Life-Cycle Product Support: **"*The Program Manager will: Develop and implement an affordable and effective performance-based product support strategy. The product support strategy will be the basis for all sustainment efforts and lead to a product support package to achieve and sustain warfighter requirements."***

Performance-Based Life-Cycle Product Support: **The PM will:** ***"Employ effective Performance-Based planning, development, implementation, and management in developing a system's product support arrangements. Performance-Based Logistics, also known as performance-based life-cycle product support) ties objective metrics delivered logistical system performance to incentives that will motivate the support provider."***

DoD Policy Guidance

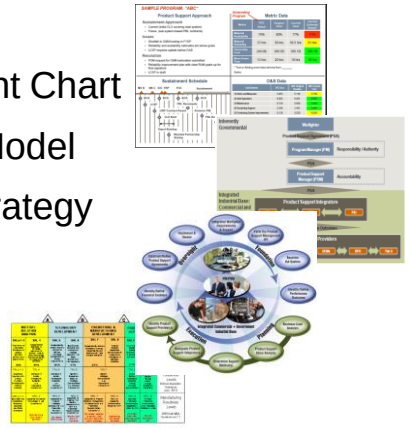
Integrated Product Support (IPS) Element Guidebook

- Includes two new elements: Product Support Management and Sustaining Engineering

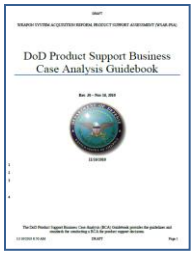


PSM Guidebook: Codifies and matures DoD Product Support

- Product Support Sustainment Chart
- Product Support Business Model
- 12-Step Product Support Strategy
- Sustainment Maturity Levels

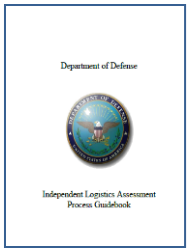


Business Case Analysis Guidebook



- Tool for the PSM
- Optimizes balance of Warfighter capabilities & affordability
- Analytic, standardized, objective
- Required for MS B/C/FOC and every five years or prior to a change to the strategy

Logistics Assessment Guidebook



- Tool for the PSM
- Validates system support strategy
- Conducted by a team of Subject Matter Experts
- Required for MS B/C/FOC and every five years or prior to a change to the strategy

Defense Acquisition University

Updates ongoing to capture latest life-cycle product support planning strategic vision and policy

Product Support Manager

PSM References & Resources: https://acc.dau.mil/psm

- Develop and implement a comprehensive product support strategy
- Conduct appropriate cost analyses to validate the product support strategy (BCA)
- Assure achievement of desired product support outcomes through product support arrangements
- Optimize implementation of the product support strategy (i.e. balance war fighter effectiveness and affordability - PBL)
- Periodically review product support arrangements between PSIs and PSPs for consistency with the overall product support strategy
- Prior to changing the product support strategy or every five years, revalidate the BCA / product support strategy

PSM Is Responsible For The Development, Implementation, And Execution Of Life Cycle Sustainment Solution

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Product Support Manager

- With rare exception, product support strategies are dependent upon both organic and commercial industry support
- The responsibility of the PSM is to achieve an effective PSS that delivers warfighter operational readiness by:
  - Determining the best blend of public and private resources
  - Ensuring integration between those entities
    - Craft Product Support Arrangements (PSAs) that are consistent with the overall PSS
    - Align resources with the PSI(s) and PSP(s)

Source: PSM Guidebook

PL 111-84 Section 805 – What's Different?

Haven't we always had Product Support Managers? Yes, but this particular legislation:

- Establishes accountable and responsible manager
- Strengthens PM Life Cycle Management authority
- Builds a better Life Cycle Logistics human capital asset while articulating a more clear career path
- Creates more respect for an integral program management position (front-line)
- Provides potential for many key roles and responsibilities to be performed better
- Is more attentive to enterprise approaches and considerations, including foreign military sales (FMS)
- Articulates inherently governmental authorities
- Advances outcome-based product support strategies

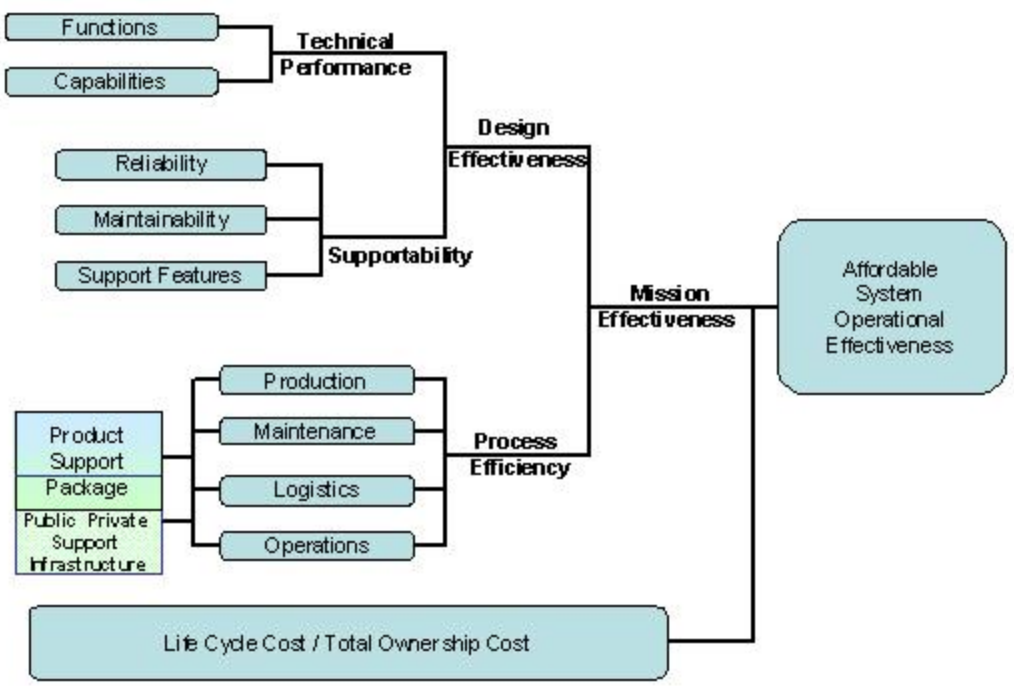
PSM Guidebook Guidance

The Product Support Manager's Guidebook provides guidance in the following areas discussed in this lesson:

- Product Support Guiding Principles
- Outcome Based Approach
- Sustainment Maturity Levels
- 12-Step Product Support Strategy
- Integrated Process Team and Stakeholders

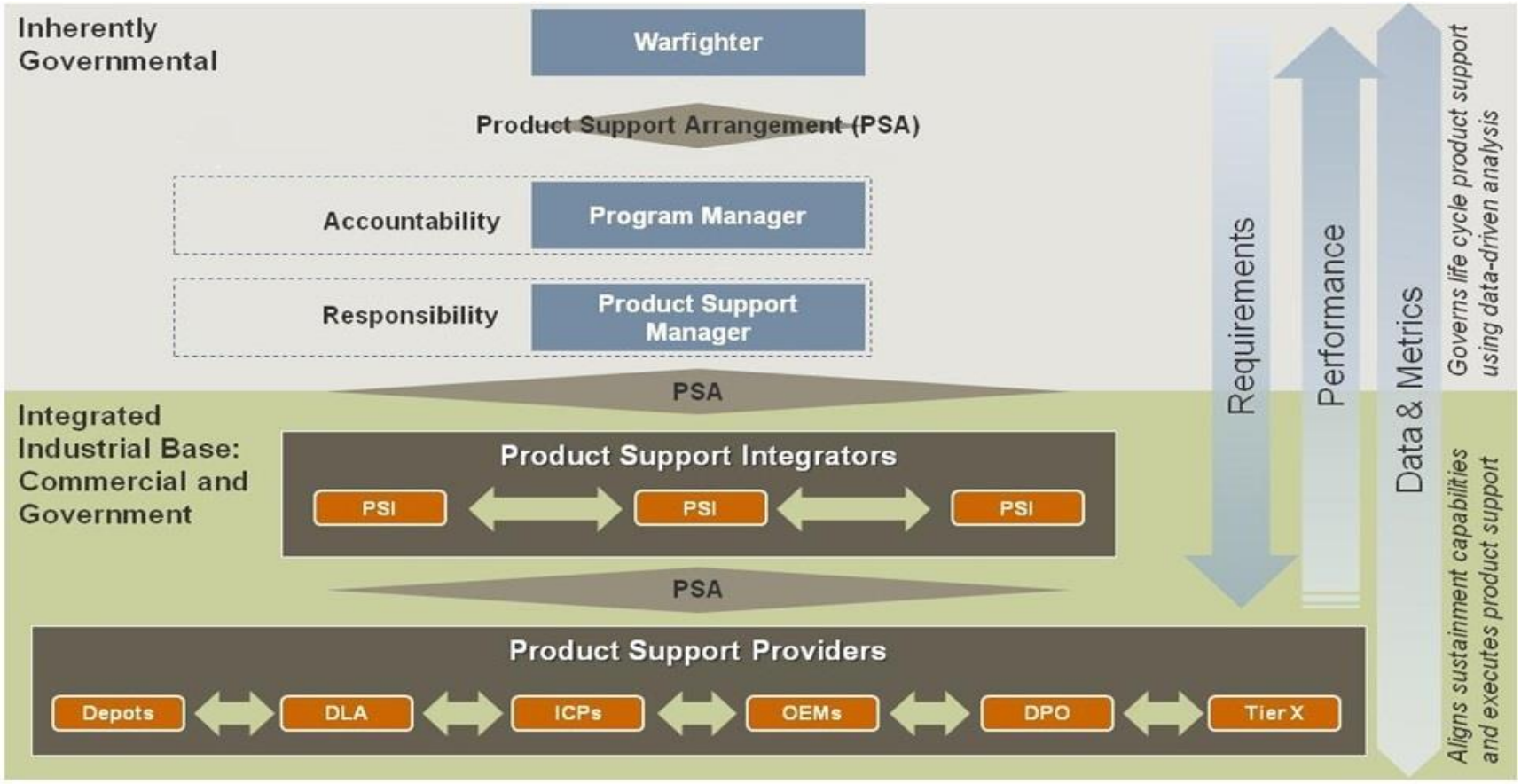
System Operational Effectiveness Model for Affordability

- This model seeks to optimize the balance between performance (technical and supportability), total ownership costs, schedule, and process efficiency.
- This model allows for how well the system will be able to perform missions over a sustained period and the ability to surge given the user's operating budget.



Source: DAG 5.2.4

Product Support Business Model



Product Support Guiding Principles

Source: Weapon Systems Acquisition Reform Product Support Assessment, December, 2008

Product Support Strategy

- The objective of the Product Support Strategy (PSS) is to achieve and sustain warfighter operational readiness outcomes
  - Achieving these outcomes is dependent on optimizing the integrated product support elements that constitute the support strategy
- Per U.S. Code § 2337, the PSM
  - Must be a properly qualified member of the armed forces or full-time employee of the DoD
  - Is responsible for developing and implementing a comprehensive PSS for the weapon system

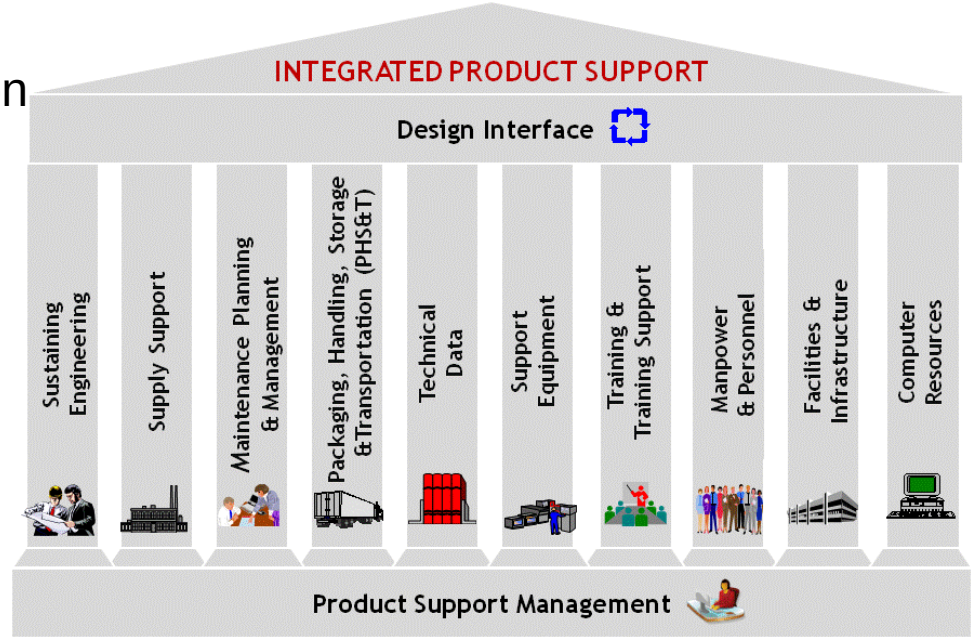
What Is a Product Support Strategy?

- Product support strategy should improve the product's:
  - Availability
  - Reliability
  - Affordability
  - Supportability
- The strategy describes the supportability planning, analyses, and trade-offs.
- The support strategy should address how oversight of the fielded system will be maintained.

Source: Defense Acquisition Guidebook

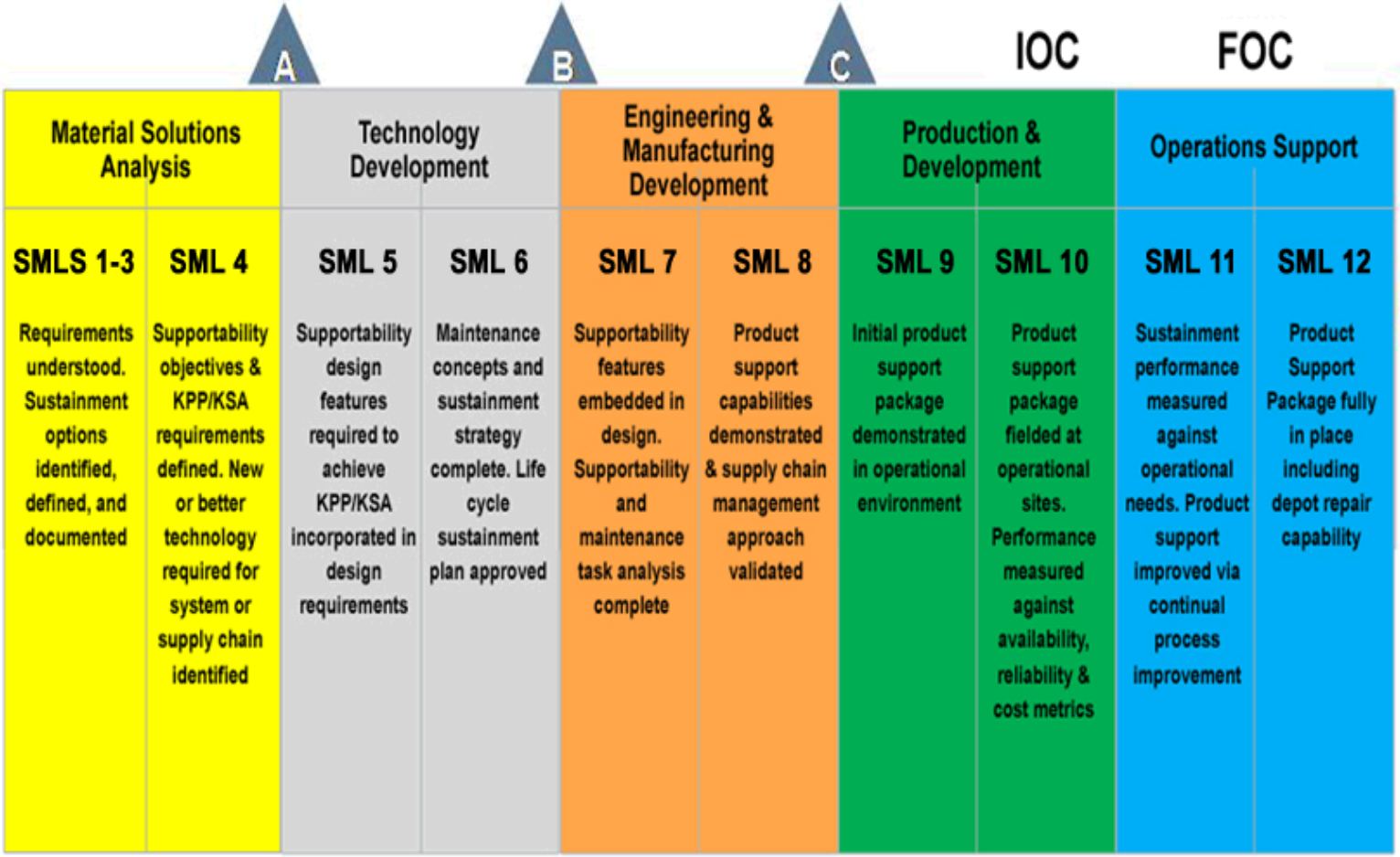
12 Integrated Product Support Elements

- 12 Integrated Product Support Elements cover all areas of weapon system supportability
- These elements ensure the Life Cycle Sustainment Plan (LCSP) is complete and integrated
- Design Interface influences engineering, manufacturing, and product support occur early in the acquisition process
- Product Support Management creates the environment to implement a total enterprise sustainment strategy

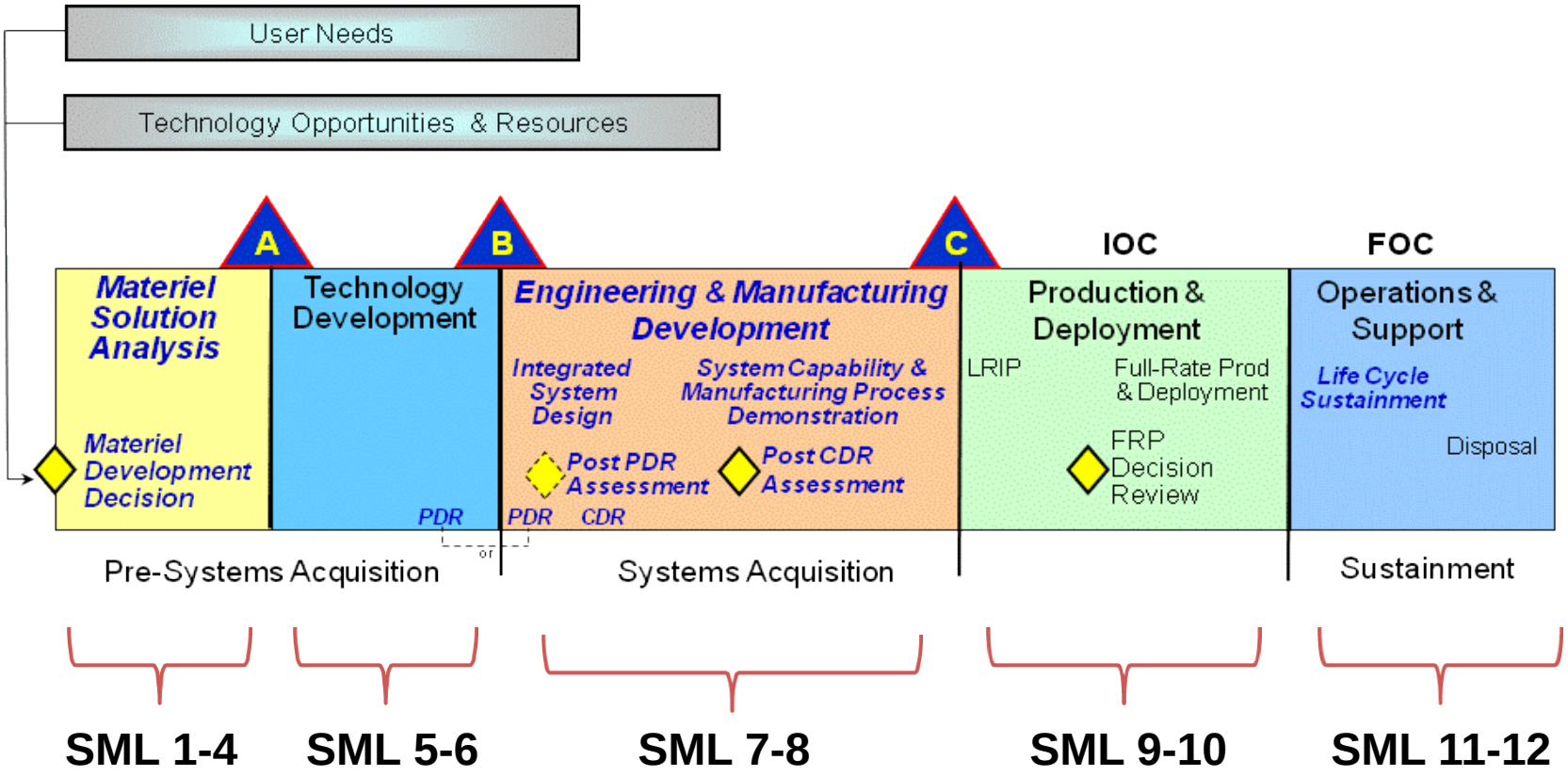


Product support is enabled by a package of 12 Integrated Product Support (IPS) elements designed to deliver system readiness and availability while optimizing system life cycle cost

Sustainment Maturity Levels (SMLs)



Sustainment Maturity Levels By Acquisition Life Cycle Phase



12-Step Product Support Strategy Process Model

12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
1. Integrate Warfighter Requirements and Support	Translate system operational requirements into the sustainment strategy that will deliver those requirements.

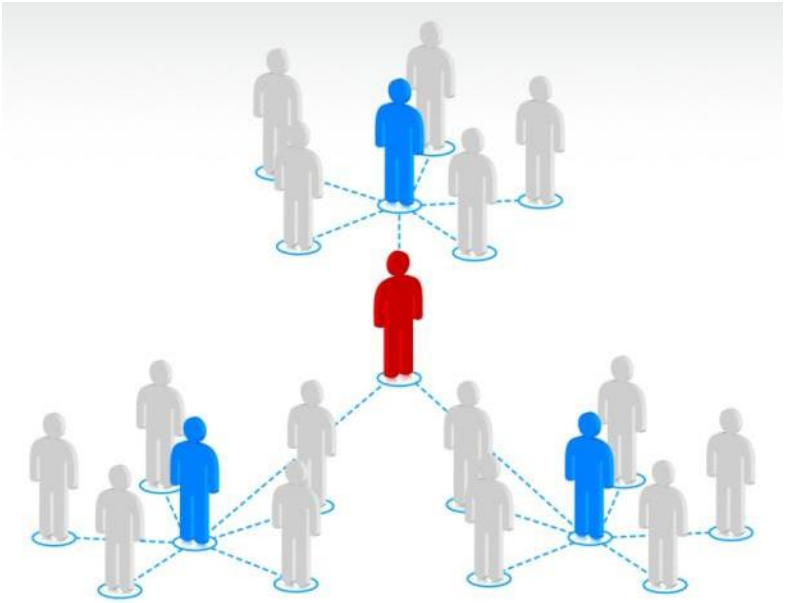
12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
2. Form the Product Support Management Integrated Product/Process Team (IPT)	Form the PSM team that will develop, implement, and manage product support.

What Is a Stakeholder?

- A stakeholder is “any group or individual who can affect or is affected by the achievement of the organization’s objectives.” *- R. E. Freeman*
- Stakeholders influence:
  - Programs
  - Products
  - Services



12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
3. Baseline the System	Collect the data, or begin data collection for new systems, that will be needed to assess and analyze support decisions, including inputs from Supportability Analysis.

Defining and documenting the system baseline answers four key questions:

What is the scope of your support requirement?
Who are the key stakeholders?
What are your cost and performance objectives?
For fielded systems, what are the historic readiness rates and O&S costs relative to the upgraded or new system?

12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
4. Identify/Refine Performance Outcomes	Using your product support requirements, develop a process for identifying critical product support outcomes and how you will measure success.

Desired Enterprise Outcomes

- Readiness, but not at any cost
- Optimizing Life Cycle Costs and Weapon System Availability & Readiness Performance Outcomes
- Empowered Government Program Manager & Product Support Manager (PSM) team
- Leveraging capabilities and best practices of both public and private sector to deliver best value product support and sustainment outcomes

Rewards of an Effective Outcome Based Strategy (1 of 2)

PBL leverages rational economic behavior to drive readiness investments:

- Under PBL, DoD pays for system performance and outcomes, not transactions.
- PBL multiple year strategy uses cost avoidance as an incentive to drive investments.

Rewards of an Effective Outcome Based Strategy (2 of 2)

- Support providers with system knowledge and investment-oriented business models innovate to convert cost avoidance into performance gains.
- Life cycle product support moves beyond repair transactions to investments in reliability, affordability, and availability, with gain sharing as affordability improves and industry profits rise.

PBL provides the incentives to apply a long-term continuous improvement strategy to product support.

Why Outcome Based? (1 of 2)

Budget pressures mean that we must do more with the same.

- Across the life cycle, product support costs for any system are larger than RDT&E and production combined…and costs are growing.
- We are buying fewer systems and keeping them longer, creating additional upward pressure on Operations and Support cost.
- Aging systems bring along baggage: obsolescence, decreasing reliability, diminishing manufacturing sources, and declining performance.

Why Outcome Based? (2 of 2)

Proven way to impact readiness and reduce costs is to continuously invest in:

- Affordability
- Reliability
- Availability
- Maintainability

…beginning with the acquisition strategy.

Incentives = Continuous Investment = Better Performance & Lower Costs = Affordable Readiness

12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

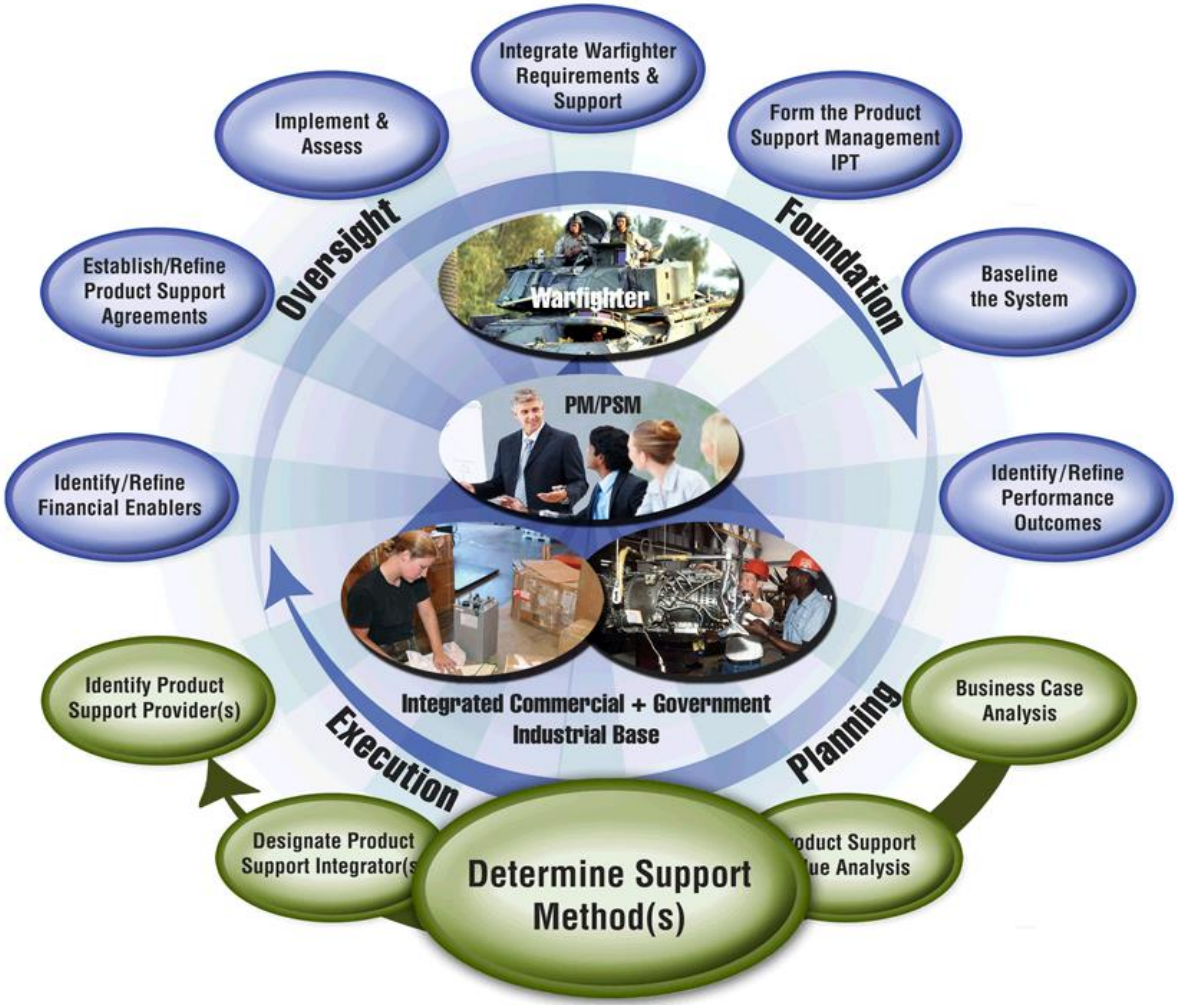
Process Step	Description
5. Business Case Analysis (BCA)	Assess the capabilities, effectiveness, cost, competencies , and process efficiencies to identify the optimum best value product support solution.

12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
6. Product Support Value Analysis	Best value analysis optimizes long-term life-cycle costs and benefits.

12-Step Product Support Strategy Process Model



Developing a Product Support Strategy

Process Step	Description
7. Determine Support Method	Determine whether support will be acquired from the PSPs, using an outcome-based or transactional-based acquisition method.

Transactional vs. PBL Strategies

Failure rates are unintentionally incentivized to remain static by transactional support constructs.

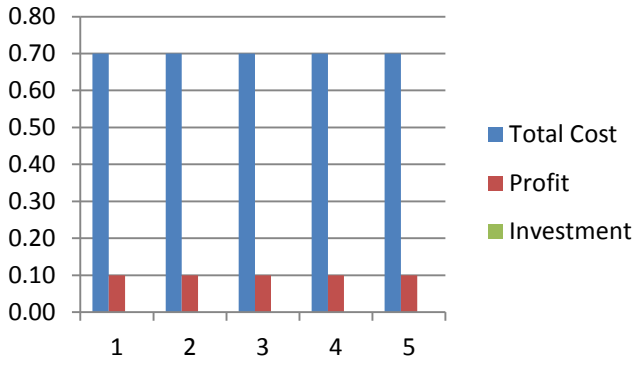
✓ Examples:

- A contractor in a transactional setting is incentivized to maximize the number of spare parts that are produced and sold. This is contrary to increasing reliability and reducing cost.
- A supplier in a transactional setting looks to the local headquarters for incentives and rewards, not to the program outcomes.

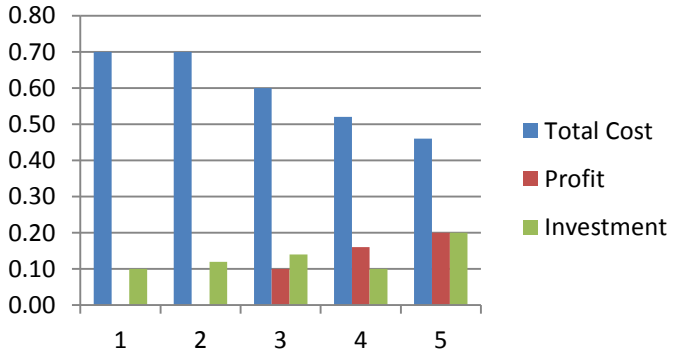
Refer to your student notes for a comparison of Product Support Strategies

PBL Business Model-
PBL vs. Transactional

Spend, profit and cost -Transactional



Spend, profit and cost - PBL



Impact of a Performance Based Governance Structure

Key points:

1. Price remains the same (or decreases).
2. While profit is low in PBL to start with, it ends up high.
3. There is no investment in traditional.
4. At the end of the contract period (year 5) the cost under transactional remains the same (or increases).
5. Cost on PBL decreases.
6. Cost is the greatest predictor of future price.
7. Cost is related to investment.
8. Investment is related to profit.

Publicly Available Information
Source: U.S. NAVAIR
Proprietary: Wesley S. Randall, Ph.D. working papers strategy, innovation, governance, and spend study – 2010
Concepts and relationships based on initial findings

Key Fundamental PBL Tenets

- ✓ Tied to Arrangements
  - Measurable and manageable metrics linked to outcomes
  - Appropriate contract type, length, and incentives
- ✓ Tied to Organization
  - Leadership champion
  - Shared risk management

Source: ODASD(MR) PBL Guidebook. See the full listing in your student notes.

It is NOT outsourcing — it "is not synonymous with CLS nor does it require a private-sector integrator" (AFI 63-107)

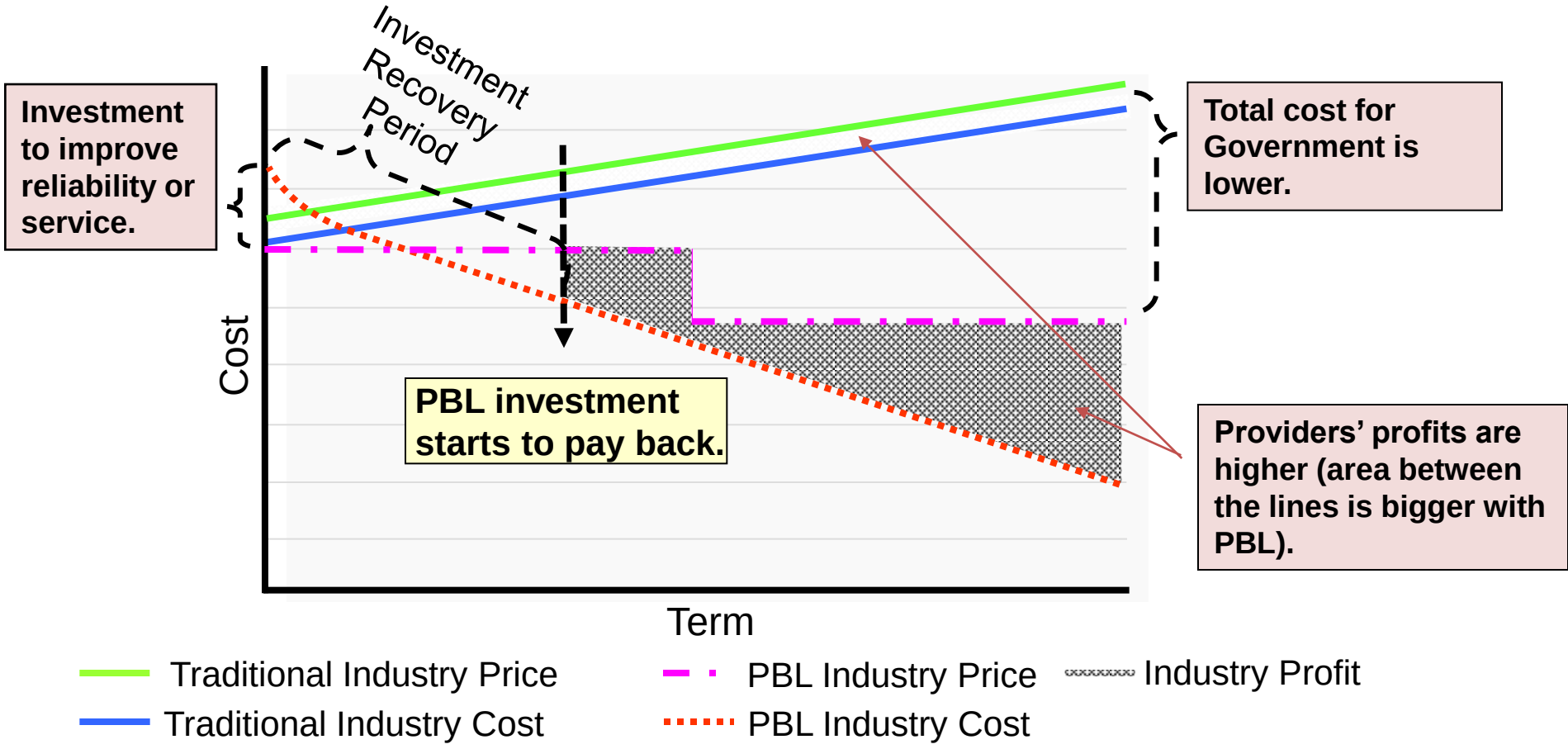
12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
8. Designate Product Support Integrator(s) (PSI)	Assess the capabilities, effectiveness, cost, competencies , and process efficiencies to identify the optimum best value product support solution.

Cost-Value Benefits of PBL

Traditional vs. Performance-Based Contract



Contract duration incentivizes investment in reliability and service.

**Notional Example*

Examples of PBL Success Stories

- OSD PBL Award Winners exemplify team success in PBL outcome excellence
- Categories in System, Sub-System and Component Levels
- On-going Awards program since 2005
- Examples highlighted:
  - Honeywell Total Logistics Support PBL
  - NAVICP Partnership Examples
  - U.S. Army / DLA HMMWV Recap Program

NAVSUP
NAVAL INVENTORY CONTROL POINT

Partnership Examples

F414 Controls & Accessories

- *Awarded Nov '04 to GEAE*
- *33 month period of performance*
- *Partnership with FRC Southeast*
- *$123M firm-fixed price contract with incentives*
- *36 7R and 887 1R NIINS covered*
- *Required availability*
- *Demand surges up to 10%*
- *Obsolescence management*
- *Inventory mgmt … rqmts determination*

H-60 FLIR

- *Awarded Sep'03 to Raytheon*
- *$123M contract w/ 5-yr base & five 1-yr options*
- *Partnership w/ FRC Southeast… depot capability facilitated thru PBL*
- *Covers 3 FLIR components … turret, electronic unit, hand control*
- *100% (IPG 1) & 90% (IPG 2-3) availability*
- *Reliability growth*
- *Obsolescence mgmt*
- *Inventory mgmt … rqmts determination*

SECDEF 2006 Winner

F/A-18 F-14 Displays

- *Awarded Sep'03 to Rockwell*
- *$360M contract w/ 5-yr base & 2 5-yr options*
- *Partnership w/ FRCs Southeast & Southwest*
- *272 NSNs covered*
- *91% availability*
- *Obsolescence mgmt*
- *Inventory mgmt … rqmts determination… config mgmt*
- *Engineering support*
- *Expanded capability / workload at organic facilities*

SECDEF 2006 Winner

Working closely with PMA, FST, NADEP, and Industry Partners

Honeywell Total Logistics Support PBL

Navy Maintenance Support

- Improved Reliability of Auxiliary Power Units
- Public-private partnership with FRC East & Southeast
- FAR Part 12 commercial (Firm-fixed price)
- Performance-Based Logistics contract
- Class 2 design authority
- Navy is reimbursed for use of depot artisans

Logistics Management

- Materiel handling, transportation and asset tracking
- Supply chain and inventory management
- Engineering and configuration management
- Quality assurance
- Technical support
- Technical data management

SECDEF PBL 2005 Winner

Exceeding Contract Metrics

Target Item	Pre TLS	2009	Target
Back Orders	125	0	0 ✓
Availability	65%	98%	90% ✓
On Time Delivery	20%	97%	95% ✓
Pick Accuracy	92%	100%	100% ✓
Channel Performance	12%	95%	90% ✓
Logistics Response Time	30 days	3.5 days	5 days ✓

Benefits

- $70M+ Savings
- Reduced Inventory
- Customer Focused
- Supply Chain Efficiency
- Asset Availability
- Accountability
- Technical Support

Proven Performance, Quantifiable Results

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Source: U.S. NAVAIRSYSCOM

U.S. Army / DLA HMMWV Recap Program

- Partnership between U.S. Army and DLA to reduce costs in rebuilding military trucks
- Pilot programs to seek “having DoD pay for material when delivered to the end user (by moving) the point of inspection and point of sale to the point of use.”
- TACOM selected DLA (DSCC) as lead Program Manager, partnering with the contractor (AM General LLC), Army Depots (Letterkenny Army Depot, Rid River Army Depot, and Maine Military Authority).
- Program metrics include:
  - Cost per Vehicle
  - Depot Maintenance Program and HMMWV RECAP Program Data (Cost)
  - Stock Out Rates
  - Quality Defects
- Results include:
  - 76% reduction in pre-program inventory
  - Inventory investment decrease by $86M over 18 month period
  - Dramatically reduced stock-out rate
  - 99.999% stock availability rate

Source: OSD PBL Award Program Nomination, 8 Jun 2009

PBL Success Stories

Figure 1. **Examples of PBL Cost Benefits**

Program	System Description	PBL Owner	Total Cost Benefit ($M)
C-17	transport aircraft	Air Force	$477
F/A-18	fighter/attack aircraft	Navy	$688
AH-64	attack helicopter	Army	$100
TOW-ITAS	integrated mobile missile and targeting system	Army	$350
Sentinel AN/MPQ-64	mobile air defense radar	Army	$302
CH-47 (UK)	cargo helicopter	UK Ministry of Defence	$250

- All DoD Components seeing improvements
- Improvements are contract incentivized and continue over life of program

- Improvements are significant, not just a few percentage points
- Almost 10 years of documented evidence now exists for PBL contracts

Figure 2. **Examples of PBL Performance Benefits**

Program	System Description	PBL Owner	Availability Improvement[1]	Cycle Time Reduction[2]
F/A-18	fighter/attack aircraft	Navy	23%	-74%
Tires	aircraft tires	Navy	17%	-92%
F-22	fighter	Air Force	15%	-20%
UH-60 Avionics	utility helicopter	Army	14%	-85%
F404 Engine	jet engine for the F/A-18 aircraft	Navy	46%	-25%

1. Ready for tasking, operational readiness, mission cabable, etc.
2. Logistics response time or repair turnaround time

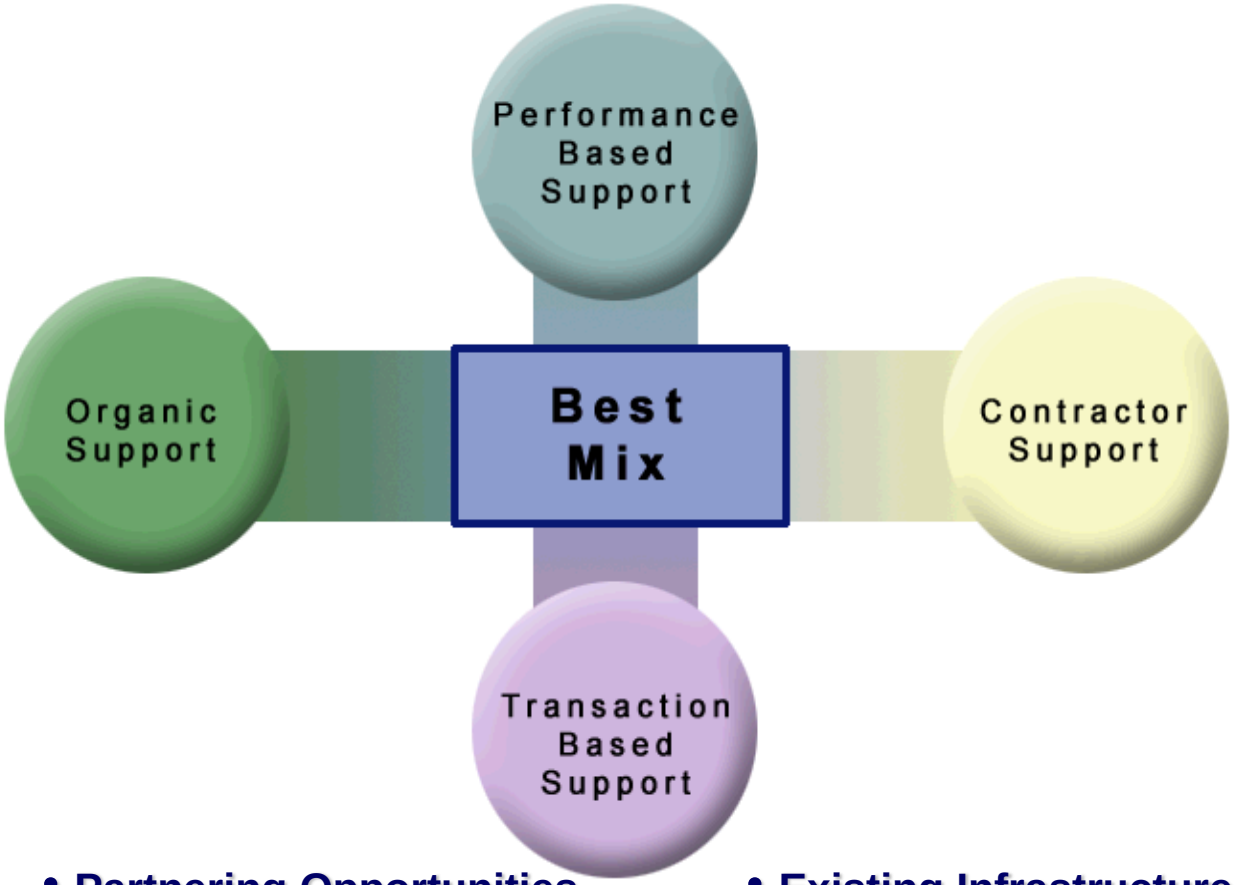
Source: *Defense AT&L*, Jan – Feb 2009

12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
9. Identify Product Support Provider(s) (PSP)	Utilizing BCA value analysis as well as PSI discretionary decisions for lower tiered supplier support, select the best mix and blend of sources to perform the product support functions.

Spectrum of Support Opportunities



- Partnering Opportunities
- Title 10
- Service Policies
- OSD/Service Guidance
- Existing Infrastructure
- Best Competencies
- Operational Mission
- Best-Value Analysis

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Product Support Decision Matrix

Product Support Strategy Implementation Matrix

	Integrated Product Support Elements		
	Single	**Multiple**	**All**
System Level	Single element for an entire system	Multiple elements for an entire system	All elements for entire system
Subsystem Level	Single element for a single subsystem	Multiple elements for a subsystem	All elements for a subsystem
Component Level	Single element for a single component	Multiple elements for a single component	All elements for a single component

"LOW" Support Integration

"HIGH" Support Integration

Areas in between are blended or hybrid strategies.

12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
10. Identify/Refine Financial Enablers	Identify the range, types, and amount of funding needed to perform the required support consistent with the terms, conditions, and objectives of the Product Support Arrangements.

12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
11. Establish/Refine Product Support Arrangements	Document the implementing Product Support Arrangements that assign and delineate the roles, responsibilities, resourcing, and reciprocal aspects of product support relationships.

12-Step Product Support Strategy Process Model

Developing a Product Support Strategy

Process Step	Description
12. Implement and Assess	Implement and manage the product support, including documenting updates to the Life Cycle Sustainment Plan (LCSP), conducting and implementing recommendations from Logistics Assessments (LAs), and maturing the Sustainment Readiness Level (SRL).

QUESTIONS?